

Title (en)

DUAL EXPRESSION VECTOR SYSTEM FOR ANTIBODY EXPRESSION IN BACTERIAL AND MAMMALIAN CELLS

Title (de)

DOPPELEXPRESSIONSVEKTORSYSTEM FÜR DIE ANTIKÖRPEREXPRESSION IN BAKTERIELLEN UND SÄUGETIERZELLEN

Title (fr)

SYSTEME VECTORIEL A DOUBLE EXPRESSION SERVANT A EXPRIMER DES ANTICORPS DANS DES CELLULES BACTERIENNES ET MAMMIFERES

Publication

EP 1588166 A4 20070627 (EN)

Application

EP 04700895 A 20040108

Priority

- US 2004000462 W 20040108
- US 43949203 P 20030109

Abstract (en)

[origin: WO2004063343A2] The present invention provides a dual expression vector, and methods for its use, for the expression and secretion of a full-length polypeptide of interest in eukaryotic cells, and a soluble domain or fragment of the polypeptide in bacteria. When expressed in bacteria, transcription from a bacterial promoter within a first intron and termination at the stop codon in a second intron results in expression of a fragment of the polypeptide, e.g., a Fab fragment, whereas in mammalian cells, splicing removes the bacterial regulatory sequences located in the two introns and generates the mammalian signal sequence, allowing expression of the full-length polypeptide, e.g., IgG heavy or light chain polypeptide. The dual expression vector system of the invention can be used to select and screen for new monoclonal antibodies, as well as to optimize monoclonal antibodies for binding to antigenic molecules of interest.

IPC 1-7

G01N 33/53; C12N 5/16; C12N 1/21; C12N 15/70; C12N 15/85

IPC 8 full level

C07K 16/00 (2006.01); C07K 16/28 (2006.01); C12N 7/00 (2006.01); C12N 15/85 (2006.01)

CPC (source: EP US)

C07K 16/00 (2013.01 - EP US); C07K 16/283 (2013.01 - EP US); C12N 7/00 (2013.01 - EP US); C12N 15/8509 (2013.01 - EP US); A01K 2267/01 (2013.01 - EP US); C07K 2317/10 (2013.01 - EP US); C07K 2317/24 (2013.01 - EP US); C07K 2317/51 (2013.01 - EP US); C07K 2317/52 (2013.01 - EP US); C07K 2317/55 (2013.01 - EP US); C07K 2317/622 (2013.01 - EP US); C07K 2319/30 (2013.01 - EP US); C12N 2795/14043 (2013.01 - EP US)

Citation (search report)

- [PA] US 2003224408 A1 20031204 - HOOGENBOOM HENRICUS RENERUS JA [NL], et al
- [A] BOEL E ET AL: "Functional human monoclonal antibodies of all isotypes constructed from phage display library-derived single-chain Fv antibody fragments", JOURNAL OF IMMUNOLOGICAL METHODS, ELSEVIER SCIENCE PUBLISHERS B.V., AMSTERDAM, NL, vol. 239, no. 1-2, May 2000 (2000-05-01), pages 153 - 166, XP004204325, ISSN: 0022-1759
- [A] AMES R S ET AL: "Conversion of murine Fab's isolated from a combinatorial phage display library to full length immunoglobulins", JOURNAL OF IMMUNOLOGICAL METHODS, ELSEVIER SCIENCE PUBLISHERS B.V., AMSTERDAM, NL, vol. 184, no. 2, 18 August 1995 (1995-08-18), pages 177 - 186, XP004020985, ISSN: 0022-1759
- [A] MIESCHER ET AL: "CHO expression of a novel human recombinant IgG anti-RhD antibody isolated by phage display", BRITISH JOURNAL OF HAEMATOLOGY, OXFORD, GB, vol. 111, 2000, pages 157 - 166, XP002210939, ISSN: 0007-1048
- See references of WO 2004063343A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2004063343 A2 20040729; WO 2004063343 A3 20050630; AU 2004204462 A1 20040729; AU 2004204462 B2 20120308; BR PI0406662 A 20051220; CA 2513025 A1 20040729; EP 1588166 A2 20051026; EP 1588166 A4 20070627; IL 169604 A0 20070704; IL 169604 A 20110428; JP 2006516195 A 20060629; JP 4773947 B2 20110914; US 2004197866 A1 20041007; US 2007037216 A1 20070215; US 2011136689 A1 20110609; US 7112439 B2 20060926; US 7906327 B2 20110315

DOCDB simple family (application)

US 2004000462 W 20040108; AU 2004204462 A 20040108; BR PI0406662 A 20040108; CA 2513025 A 20040108; EP 04700895 A 20040108; IL 16960405 A 20050707; JP 2006500864 A 20040108; US 201113014422 A 20110126; US 50339906 A 20060810; US 75330904 A 20040108